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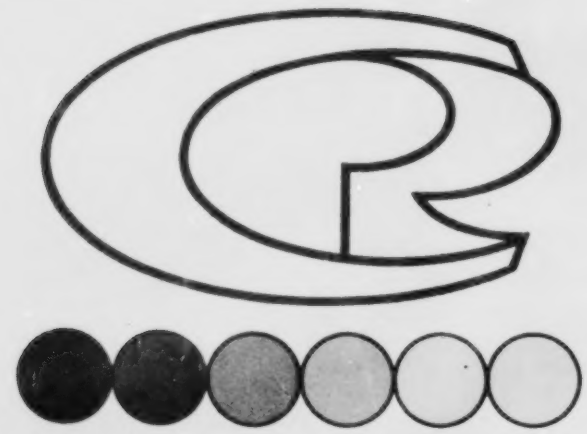

Pollution Research & Control Corp.

616 E. COLORADO ST.
GLENDALE, CALIF. 91205
(213) 240-0515

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A summary is presented of the results of an emission inventory for the State of Idaho, representing conditions as they existed in 1970. The inventory is limited to five primary pollutants: particulates, sulfur dioxide, carbon monoxide, hydrocarbons, and nitrogen oxide. The five major sources of such emissions included in this inventory are: fuel combustion, process losses, solid waste disposal, transportation, and miscellaneous sources. The state totals are made up from the totals of three intrastate and a portion of one interstate Air Quality Control Region. In addition, emission totals are summarized for the major urban areas of the state: Boise, Pocatello, Idaho Fulls, Lewiston, Twin Falls, and Coeur d'Alene.

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SUMMARY REPORT
ON

AIR POLLUTION EMISSION INVENTORY FOR THE STATE OF IDAHO

Prepared for

IDAHO DEPARTMENT OF HEALTH
AIR POLLUTION CONTROL SECTION

and

ENVIRONMENTAL PROTECTION AGENCY
RALEIGH, NORTH CAROLINA

September, 1971

POLLUTION RESEARCH & CONTROL CORP.
616 East Colorado Street
Glendale, California 91205
(213) 240-0515

Acknowledgement

It would have been impossible to perform this task without the cooperation of the Air Pollution Control Section, Department of Health, State of Idaho. The assistance of other State agencies is also gratefully acknowledged. The work was supposed under Contract 68-02-0045 by the United States Environmental Protection Agency.

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AREA DESCRIPTION

The State of Idaho ranks thirteenth (13th) in size in the United States; in population, however, Idaho ranks forty-second (42nd) in the nation. Idaho has an average population density of eight persons per square mile.

Most of Idaho's population is concentrated in a "fertile crescent" which roughly follows the Snake River. Larger land masses of Idaho are both uninhabited and uninhabitable, due to the topography.

Idaho has forty-four (44) counties that vary greatly in size and population, with half the counties having less than 10,000 residents. Idaho's cities range in population from 12 to 72,000. There is only one resident per two square miles in the least densely populated counties, while there are over one hundred (100) persons per square mile in each of the two more densely populated counties. The total land area is approximately 84,000 square miles.

The State is subject to a wide range of climatic conditions. Temperatures range from summer readings of 90°F to 100° F in the southerly sections, to below zero temperatures in the winter in the northerly areas. For the State as a whole, the average January temperature is 24°F; the average July temperature, 70°F. Most of the heavy snows and rains occur on the higher elevations of land and tend to be minimal on the lower and southerly areas. Elevations range from over 12,000 feet to 700 feet above mean sea level.

Automobile statistics follow those of population. Much of Idaho is without roads of any sort, nor are there railroads in most of the State. The usage of light aircraft is rather extensive in intrastate travel. Air traffic is a seasonal variable with the heaviest travel occurring in the warmer months.

The extent of industrialization in Idaho is limited to a few classifications. Some of these are, namely: kraft mills, potato industry, seed and grain, and lumbering. A large part of Idaho's wealth comes from the agricultural section of its industry. Potatoes and sugar beets form a large part of this operation, along with seasonal fruit crops, grain and seed, and wood products. Industrial concentrations are, for the most part, missing. Two exceptions are: Lewiston, Idaho - a paper mill installation of Potlach Forests Industries (PFI) dominates the area; and Kellogg, Idaho - a large smelting operation of the Bunker Hill Company. Scattered throughout the southern part of the State are graineries, potato processors, and sugar beet processors. For the most part, these operations would not meet the criteria for a point source operation (in total weight of emissions), except that they are included in the list of "major pollutant sources", as specified in the Federal Register, Vol. 36, no. 67.

The only large urban area in the State (greater than 50,000 population) is the city of Boise and its immediate environs. Greater Boise, with a 1970 census of over 90,000 people, has the largest number of homes and automobile regulations. It also serves as the State capitol.

Boise dominates the Air Quality Control Region 064, consisting of Ada and Canyon Counties. Boise has the largest and busiest airport in the State, and is a major transportation hub.

Forestry operations and lumbering industries tend to follow the major areas of timberland. These occur mainly in the northern and central areas of the State. Much of these forest areas are in Federal land holdings, such as the Sawtooth, Caribou, Targhee, Salmon, Challis, and Payette National Forests. Many of these larger forests have primitive areas lacking any type of development.

INTRODUCTION

The Clean Air Act requires that each State submit to the Environmental Protection Agency a plan that provides for the implementation, maintenance, and enforcement of the national ambient air quality standards within each Air Quality Control Region (AQCR). To begin such a plan requires an inventory of emissions and the sources of the emissions within each AQCR.

The inventory is limited to five primary pollutants: particulates, sulfur dioxide, carbon monoxide, hydrocarbons, and nitrogen oxide. The five major sources of such emissions included in this inventory are: fuel combustion, process losses, solid waste disposal, transportation, and miscellaneous sources.

This report is a summary of the results of an emissions inventory for the State of Idaho, representing conditions as they existed in 1970. The state totals are made up from the totals of three intrastate and a portion of one interstate Air Quality Control Region (See map, Figure 1).

In addition, emission totals are summarized for the major urban areas of the State: Boise, Pocatello, Idaho Falls, Lewiston, Twin Falls, and Coeur d'Alene.

METHODOLOGY

The generation of an emissions inventory required, as a first step, the creation of a mailing list of possible emission sources.

This mailing list was derived from: industrial directories, lists of hospitals and institutions, grain and seed handlers, rock and gravel operators, lumbering facilities, and asphalt batch plants. A listing of dry cleaning operations was obtained from telephone company directories.

Questionnaires were sent to all firms and agencies on the mailing list. Specialized questionnaires, patterned after forms developed by the Federal Air Pollution Control Office, were sent to specific industrial groups.

Recontacting and follow-up on the questionnaire mailing was required, to obtain the emission data necessary for the inventory.

By the time deadline required for submission of the emissions inventory, about 80% of the questionnaires had been finalized.

Data from the questionnaires were placed on data reduction sheets, suitable for the key-punching process.

Upon analysis of the emission data, a total of 253 emissions were considered as point sources. The other data were considered together as part of the area source.

The process of developing emission data from the information obtained by the questionnaires and personal contacts followed the techniques developed by the National Air Pollution Control Administration.[1]

The emissions data were divided into two categories: one associated with the burning of fuels, the other with industrial processes.

For the emissions due to fuel combustion, the estimates were made by the application of appropriate emission factors, as given in "Compilation of Air Pollution Emission Factors"[2], and selected fuel composition parameters.

For industrial process emissions, the estimates were all made through the use of emission factors[2], and were based on the amount of process material involved in the operation under consideration.

Another area of emissions arises from the activities associated with solid waste disposal. That portion of the waste burned by various methods was considered, and estimates of emissions were made, based, again, in accepted emission factors.

The plan of data reduction and analysis involves the separation of the pollution sources into two types: point and area sources. Point sources were listed for those operations having yearly estimated emissions of ten (10) tons or more. Some installations which had less than this level of emissions were kept as point sources; these mainly were of the industrial categories listed as "major" air polluting industries in the Federal Register[3]. Point sources were located within each Air Quality Control Region by means of the Universal Transverse Mercator (UTM) coordinate system, as given on the appropriate U.S. Geological Survey topographic maps. The other emission sources of a fixed type were placed into the area source category.

Area source data were considered to occur uniformly over the area (Air Quality Control Region). Besides the minor industrial emitters, the other components of the area source include those involved

with transportation, waste disposal, and the many small fuel burners associated with residential and commercial activities.

The following paragraphs present, in detail, the methodology involved in estimating emissions from the various categories of sources.

Fuel Consumption by Stationary Sources

1. Residential

Residential fuel use is mainly for space heating, but some is also burned in water heating and cooking activities.

The emissions from this type of source were estimated on the basis of the amount of fuel consumed during the year 1970.

In the case of natural gas fuel, the usage for each county was obtained from the utilities involved[4].

For the other fuels, no such information is available, only state-wide total consumption figures.

To make a reasonable estimate of fuel usage by county, recourse was made to the 1970 census of population.[5] Not available at the time was the 1970 figures on Housing Units, the unit used to enumerate the number of houses using the various fuels.

The ratio of 1970 to 1960 population was applied to the 1960 Housing Unit statistics[6], to obtain 1970 Housing Unit estimates.

The total number of Housing Units burning coal in 1970 was estimated as being lower by 66% than the figures for 1960, according to the Idaho Petroleum Council.[7]

Calculations of emissions followed the techniques given by Bierbaum and Gedgandas.[1]

A sample calculation for fuel oil, using the assumption that 0.18 gallons of #2 oil is used for heating per degree-day is:

$$\text{Total fuel used (per county)} \; .10^3 \text{ gal.} = \frac{\text{Degree Days } (0.18)\ (\text{H. U.})}{1,000}$$

NOTE: HU = Number of Housing Units using fuel oil in County.

(The degree day averages were obtained from climatic data[8], applied to each county.)

A similar calculation was made for coal burning Housing Units, with the fuel-degree day relationship here being 2 pounds of coal per degree day, which is based on the relationship of heat output between fuel oil and coal.

2. Commercial

a. Natural Gas

The actual gas consumption figures were used, as supplied by Washington Water Power and Intermountain Gas Co.[4] Point source usage was deducted to obtain area source totals.

b. Coal

Usage was considered nil, based on the information gathered from the point source questionnaires and the U.S. Department of Interior's Minerals Yearbook.[9]

c. Residual Oil

Zero usage was assumed, based on usage reported in point source questionnaires, and USDI Mineral Surveys reports.[10]

d. Distillate Oil

Residential fuel oil usage was deducted from the total sales shown in USDI reports.[10] The figure was adjusted for the assumed 1970 changes. A further deduction to account for point source usage was made, leaving the remainder as the area source. The area source balance was apportioned by Housing Units for counties, and counties combined for total Air Quality Control Region figures.

3. Industrial

a. Natural Gas

Actual consumption data were provided by gas suppliers.[4] Point source usage was subtracted to obtain remainder as area source.

b. Coal

After deducting point source amounts from the total coal usage reported in the USDI reports, there was a zero balance for the area source due to coal burning. (the total coal usage from the point source questionnaires equalled the combined Idaho and Montana figure found in in the U.S. Department of Interior report[9]; no additional information was available from the regional coal association[11].)

c. Residual Oil

The point source usage was subtracted from the total for all residual oils given by USDI's Mineral Industry Survey for 1969.[10] The difference was apportioned to the counties on a Housing Unit basis and reported as an area source.

d. Distillate Oil

The distillate oil totals from the USDI Mineral Industry Survey provided the basic data, with deductions for the point source usage. Apportionment by counties was by Housing Units.

4. Industrial and Commercial Point Sources

Where questionnaire information indicated substantial fuel burning, the operation was treated as a combustion point source. The cut-off for this classification was ten (10) tons of emissions annually. Sources of lesser emissions were placed into the area source classification.

Fuel Consumption by Transportation Sources

1. Motor Vehicles

Actual data on vehicle miles per year were obtained by the State of Idaho, Department of Highways, for the year 1970.[12] The data were supplied for county and city, where applicable. The data received were very specific, as to urban and rural mileage. A simple calculation based upon 12.5 miles per gallon of fuel used in rural and urban mileage yielded a figure which compared quite favorably with fuel sales within a delineated area. Apportionment was direct by vehicle mile per year for any political jurisdiction. A speed of 25mph for urban areas and 45mph for rural areas was used in determining emission estimates.

2. Diesel Motor Vehicles

Determination of the fuel usage by diesel vehicles was based upon annual vehicle miles reports.[12] A figure of 3.5% of the rural mileage and 2.5% of the urban mileage was selected.[13]

These figures were based upon the incidence of diesel truck traffic as related to the gasoline motor vehicles.[1] No exact data were available on actual diesel vehicles miles per year. However, some estimate could be made based upon total fuel sales information supplied by the Idaho State Tax Commission, Motor Fuel Division. Most vehicle miles related to diesel vehicles are rural in nature (highway usage) rather than urban (streets in cities).

3. Railroads

The actual mileage, by county, of the railroads, was determined by measuring the rail lines as shown on the Idaho State map.[14] Measurement was made using a totalizing wheel, map measuring instrument. Fuel consumption was based upon the techniques of Bierbaum and Gedgaudas.[11] The fuel consumption was entered on the appropriate forms and apportioned by county fuel usage. The information given in the USDI Mineral reports for fuel oil usage by railroads was used as a balance.

4. Aircraft

Data were taken from the Official Airline Guide book for commercial carriers. Data on aircraft movement, other than commercial aircraft, was supplied by the airport managers of the cities of Pocatello, Boise, and Idaho Falls. For the other city airports of Lewiston and Twin Falls, estimates were made by extrapolating from the more complete data supplied by the Boise Airport manager. Emission factors used were from McGraw & Duprey.[2]

Industrial Process Losses

The subject of industrial process losses is a complex one. Most operations lose a certain amount of materials into the atmosphere as a result of the processing involved. Such operations as gasoline marketing, tank form storage, and dry cleaning activities emit hydrocarbons. Other processes emit particulate matter and various gases.

In most operations, unless specific data were supplied by the returned questionnaires, an estimate would be impractical without detailed knowledge of the specific process involved. Details regarding the estimation of specific process losses are enumerated below:

1. Gasoline Marketing Losses

A loss of 21 pounds per 1,000 gallons of gasoline was assumed. This figure represented the sum of the losses from auto tank filling and service station tank filling losses. All auto tank filling losses are due to splash fill, which has a value of 12 pounds per 1,000 gallons, according to national data.[2] Considering the cool temperatures that exist in the State, a figure of 9 pounds per 1,000 gallons was selected as being a better estimate.[13] Apportionment was based on the actual gallonage figures supplied by the State of Idaho, Tax Commission, Motor Fuel Division, for 1970.

2. Tank Farm Emissions

The only tank farm considered was that located at Boise. The figures for the number of tanks, types, and throughput was supplied by the operators. Emissions factors are given in Ref. 2.

3. Solvent Evaporation

On the basis of returned questionnaires, it was determined that, with one exception, there were no point source dry cleaning solvent users in the State of Idaho. Therefore, to calculate dry cleaning emissions as an area source it was assumed that 2.7 pounds per person per year of dry cleaning solvent was lost into the air.[13]

4. Lumbering Process Losses

The important lumbering industry in Idaho provides a type of process loss to the atmosphere.

Unwanted scrap from sawmill operations is disposed of very commonly by conical incinerators, called teepee burners.

In some larger lumber mills, the wood waste material is burned as fuel; such installations are called hog-fuel boilers.

The two emission sources are detailed below.

a. Teepee Burners

Teepee burners operate, for the most part, on a part of the year basis. Their usage is contingent upon the lumbering operations that occur seasonally throughout the State. Most burners are not monitored for exhaust gas temperatures, amount of excess air, or other controlling factors. Therefore, estimated operating conditions and emission factors were used if other data were lacking.[13]

b. Hog Fuel Boilers

Data on hog fuel boilers were obtained from the questionnaires. Emission factors were provided by EPA, Region X.[12] Emission factors for each type of boiler (dutch oven, stoker furnace) were used, where the type of installation was known. In the other cases, the higher emission factor was used. Supplementary fuel, if any, was considered separately, as part of the combustion emissions.

Where questionnaire information was more specific, the reported data were used in place of the above approximations.

Refuse Disposal

Disposal of solid waste by burning is another area where emissions are released to the atmosphere.

The main types of this activity include open burning of trash, incineration in large incinerators, slash burning, and agricultural burning.

1. Open Burning

It was determined that the average waste disposal per person in Idaho was 5.5 pounds per person.[15] It was further determined that 25% of this waste was burned in urban counties and that 75% of this waste was burned in rural counties.[13] Rural counties were denoted by their overall small population and the

small population in the cities within these counties. The counties considered to have 75% of their waste burned were: Adams, Blaine, Butte, Camas, Clark, Custer, Jefferson, Lewis, Lincoln, Oneida, Owyhee, Teton, and Valley.

2. Incineration

Analysis of returned questionnaires and conferences with State officials indicated that no incinerators equivalent to the municipal or large industrial types exist in Idaho at the present time.

While such organizations as schools and hospitals did maintain incinerators, in some cases, none qualifies as point sources. Emissions estimated from these sources were apportioned by weight of material burned, to the counties where such sources were located.

3. Slash Burning

Slash burning is an operation unique to forested areas. It is a process whereby the accumulation of wastes due to logging operations is combined with natural debris and burned in the open. It is an operation that varies drastically from year to year, and which is poorly documented as to exact tonnages involved.

An estimate of the annual tonnage was from a previous study of the problem.[16] Lacking data for individual counties, it was decided to apportion 90% of the estimated total tonnage to the Idaho Intrastate AQCR.[13] This AQCR has the largest area and contains most of the State's forests. The apportionment of the tonnage within this AQCR is shown by Figure 2.

4. Agricultural Burning

Several crops are grown in Idaho which involve burning of field waste as a regenerative or preventative measure. For potatoes, the burning of the vines serves to set the potato crop for harvesting, as well as to decrease the incidence of a plant disease.

Other large field crops in Idaho are the grains and grasses. The grains, notably barley, use stubble burning as a part of the field preparation prior to replanting. The grasses are harvested for seed, and then the stubble is burned.

The data for the acreage involved was supplied by the Idaho Air Pollution Control Agency.[15] It was determined that the use of emission factors for the burning of fine fescue grass stubble would be applied in all cases.[13] This would apply to the burning of potato vines and other stubble as well, as no additional information was available to facilitate differentiation between types of crops. Apportionment was made using the actual county totals.

Emission Factors and Fuel Parameters

The emission factors applied to the various categories of sources were obtained from a compilation by the Environmental Protection Agency.[2]

Fuel parameters used in this inventory are given in Table 5.

Allowable Emissions

Allowable emissions for two pollutants, suspended particulates and sulfur dioxide, were calculated for two sets of regulations. The first was the existing Idaho air pollution regulation, the second was the Model Regulation contained in the Federal Register.[3]

The results of these calculations were entered in the point source data punch card decks.

RESULTS

Summaries of annual emissions by source type for each Air Quality Control Region are presented in Tables 1 through 16.

An alternate depiction of these summaries may be found in a series of pie charts (Figures 3 to 6).

Special summaries for hydrocarbons are listed as Tables 17 through 20.

Tables 21 through 26 present emission summaries for the six largest urban areas in the State: Boise, Pocatello, Idaho Falls, Lewiston, Twin Falls, and Coeur d'Alene.

OMISSIONS AND NOTES

A. Not included in this report are:

a. Off-highway usage of fuel for vehicles (no figures available)

b. Liquid Petroleum Gas usage (no figures available)

c. Wood usage for heating (no figures available)

d. Tank Farms (Pocatello - received too late for processing)

e. Structural Fires (no data available)

f. Miscellaneous Sand and Gravel, Grain Handling Operations: A total of 36 establishments were non-responsive.. However, each one was considered a minor source after consultation with State personnel.

B. Notes

1. All original forms, questionnaires, etc., have been returned to the Air Pollution Section, Idaho Department of Health.

2. Copies of computer print-out and punch card deck have been sent to the Air Pollution Section, Idaho Department of Health.

3. Copies of the computer print-out have been sent to EPA, Region X.

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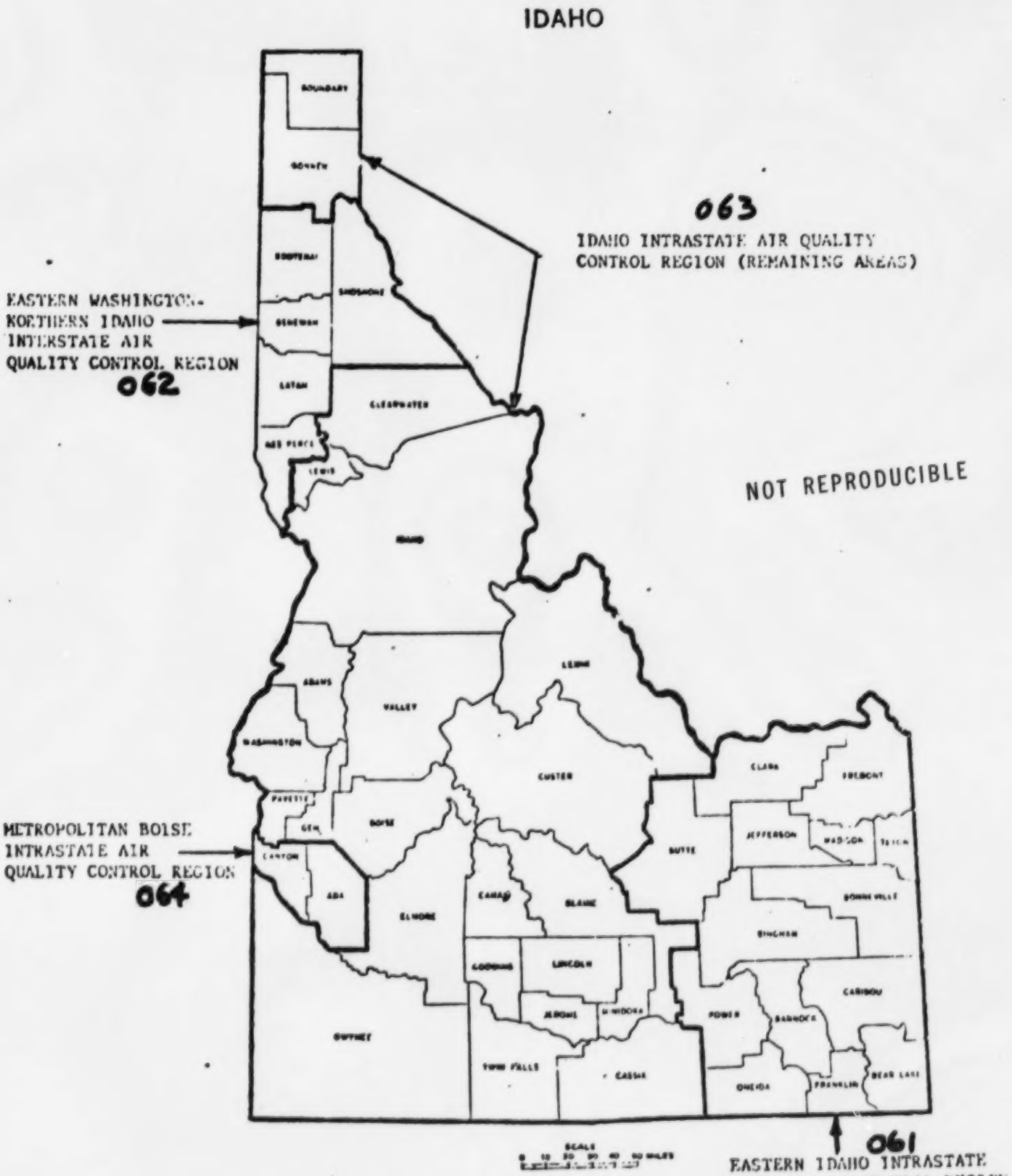
FIGURE 1



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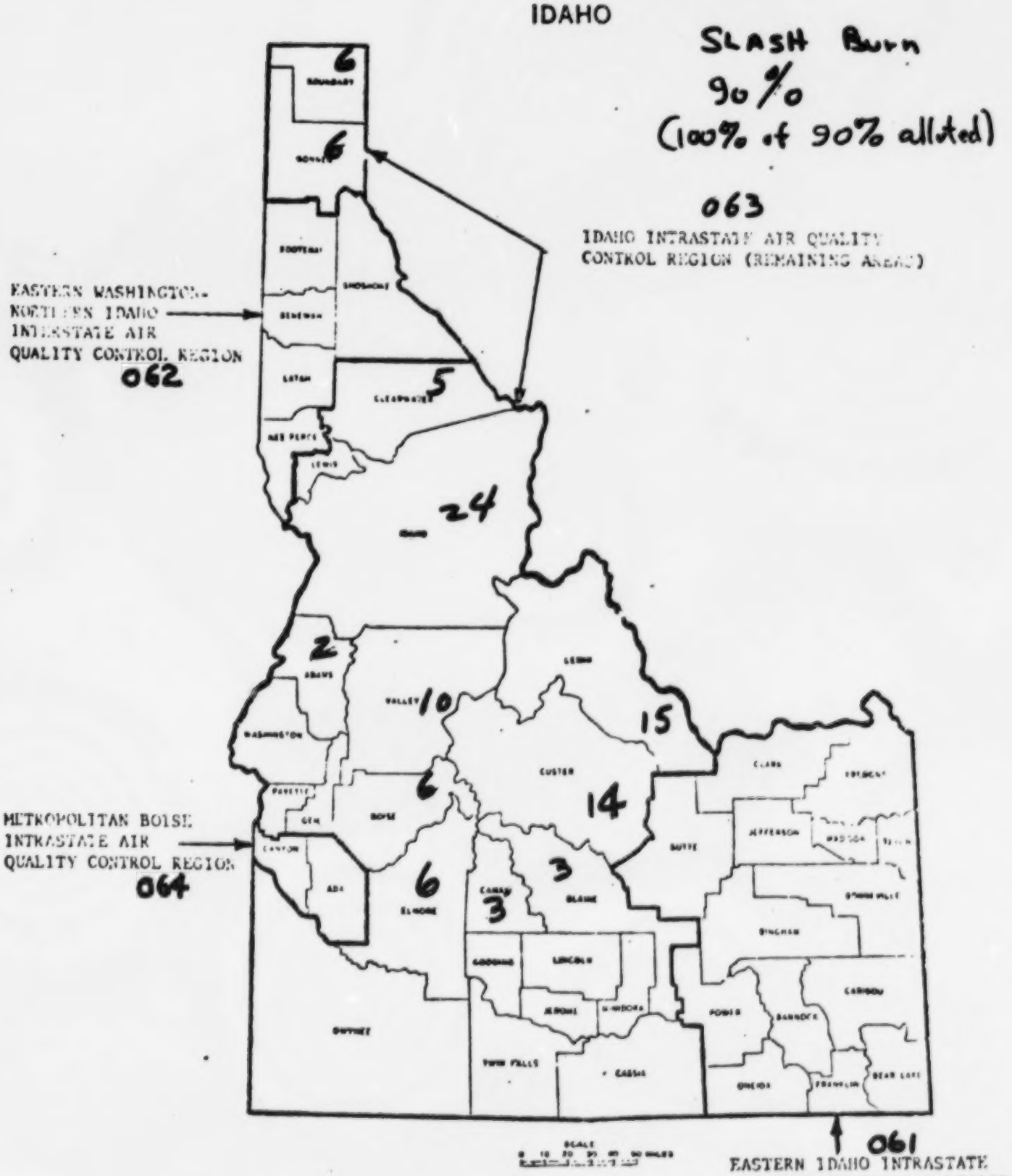
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EASTERN WASHINGTON-NORTHERN IDAHO INTERSTATE AIR QUALITY CONTROL REGION
062
METROPOLITAN BOISE INTRASTATE AIR QUALITY CONTROL REGION
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061
EASTERN IDAHO INTRASTATE AIR QUALITY CONTROL REGION
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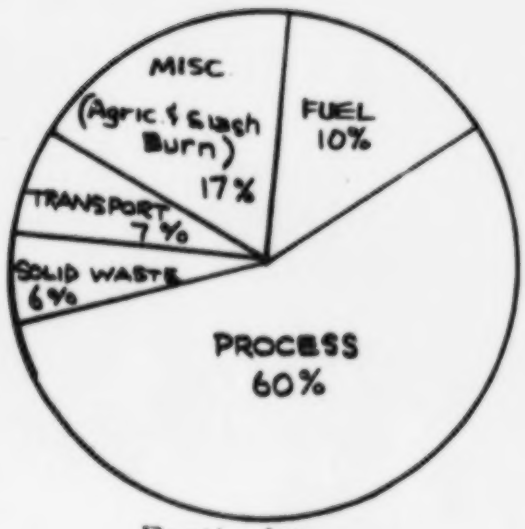
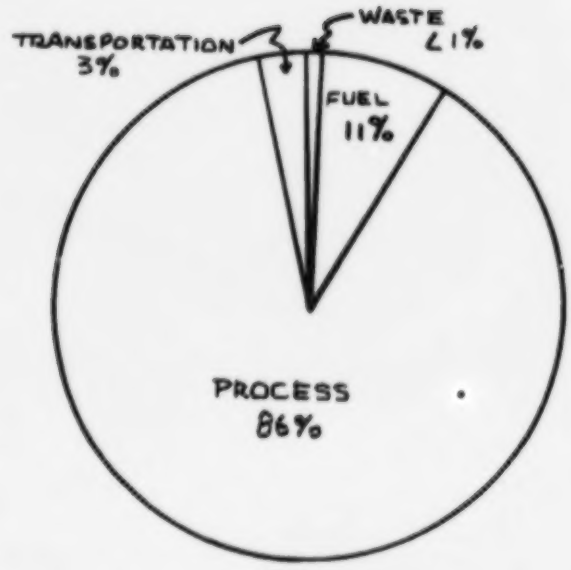
6
3
3
SCALE

FIGURE 3

STATE OF IDAHO AQCR 061



Particulate



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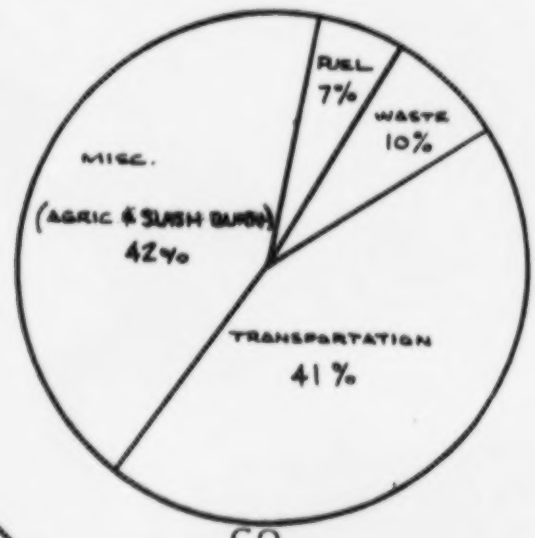

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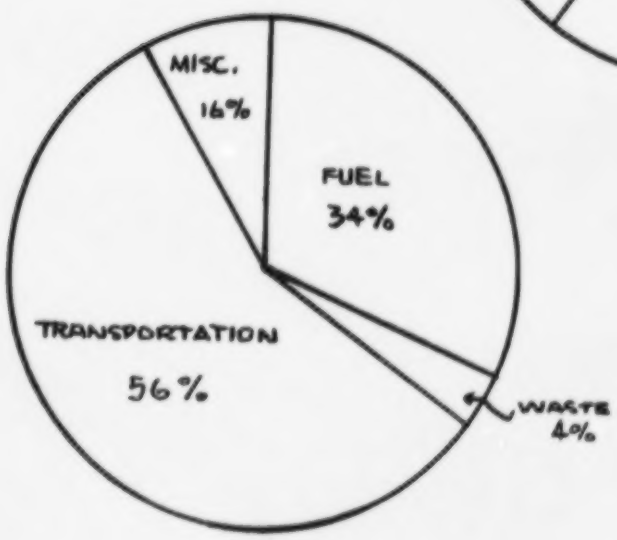

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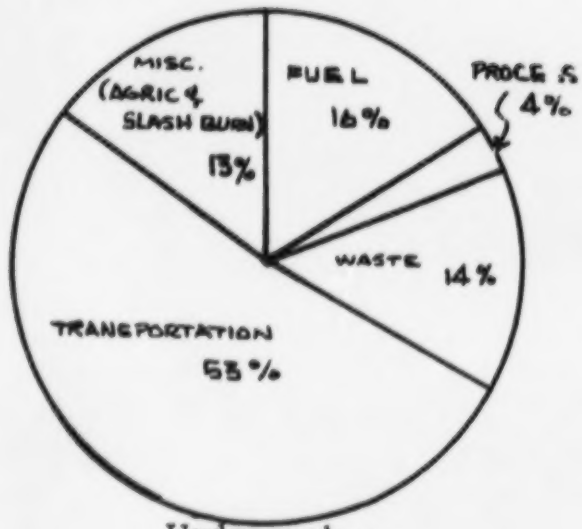
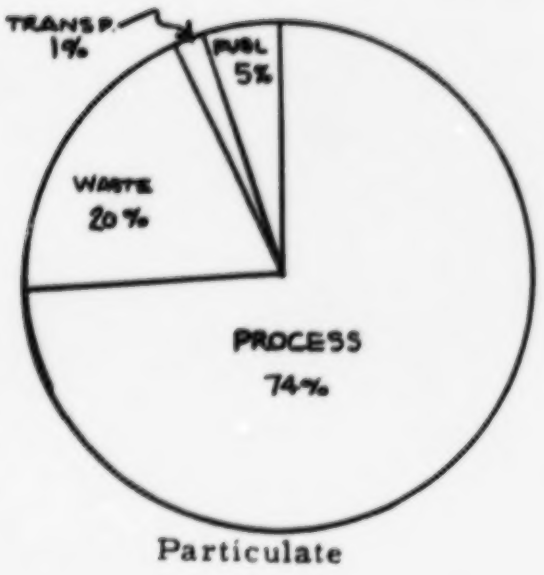


Hydrocarbon

FIGURE 4

STATE OF IDAHO AQCR 062



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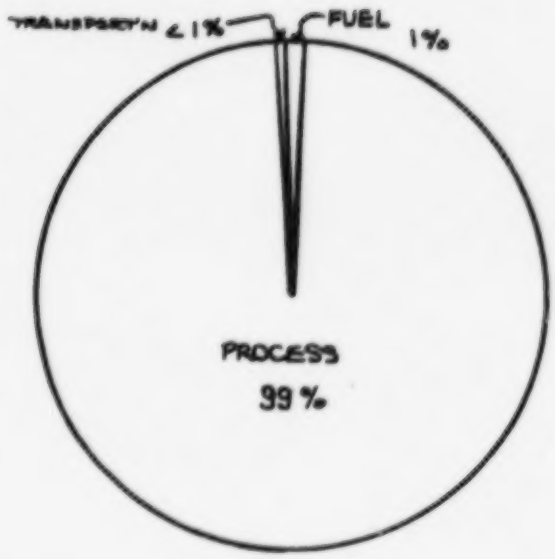

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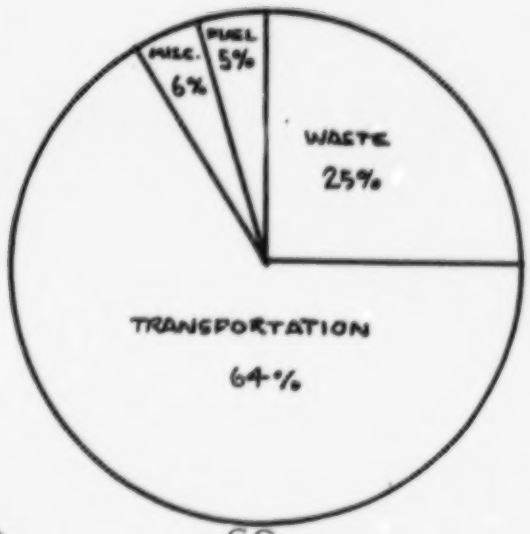

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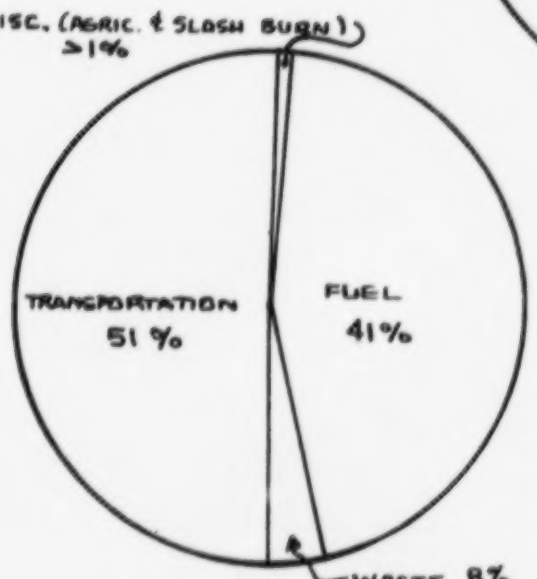

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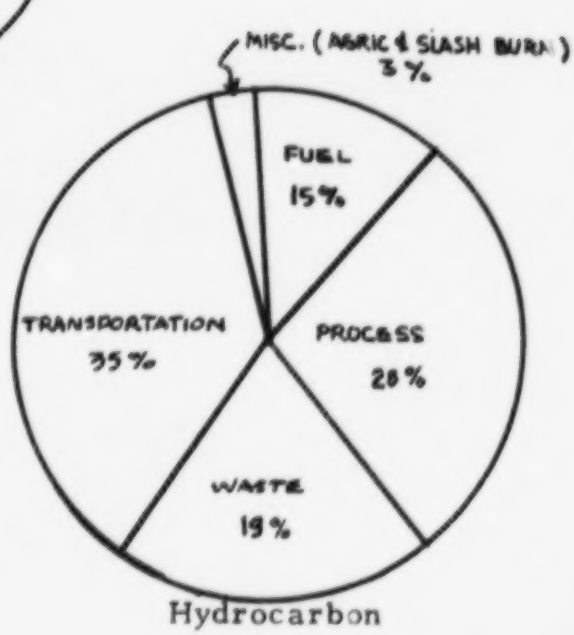
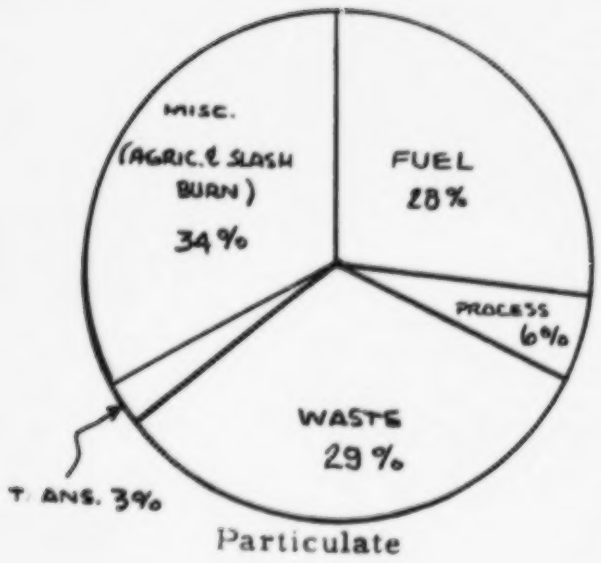


Hydrocarbon

FIGURE 5

STATE OF IDAHO AQCR 063



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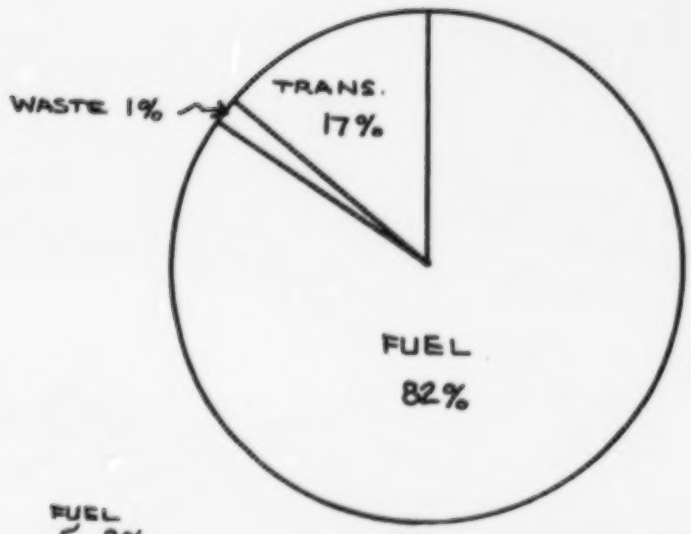

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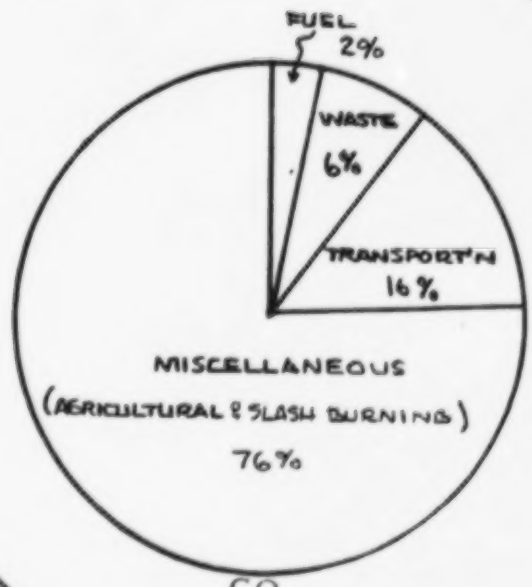

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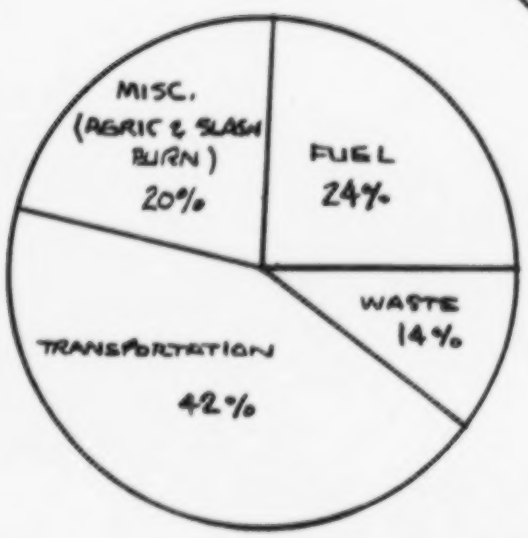

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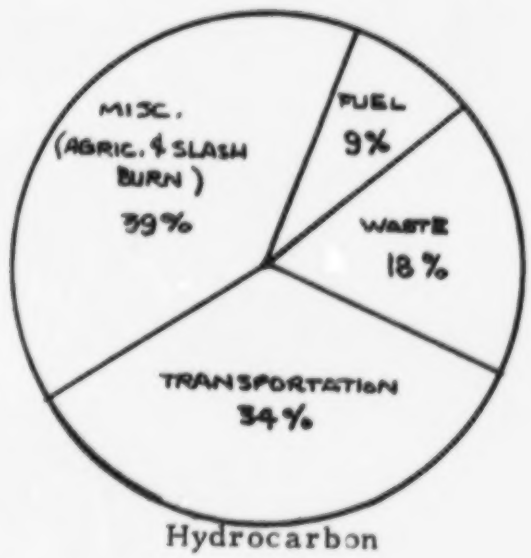
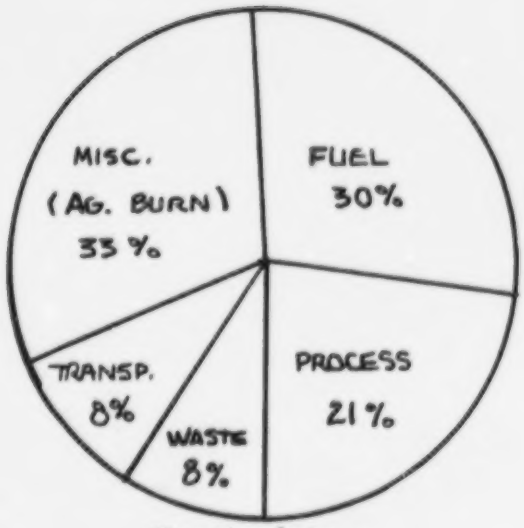


Hydrocarbon

FIGURE 6

STATE OF IDAHO

AQCR 064



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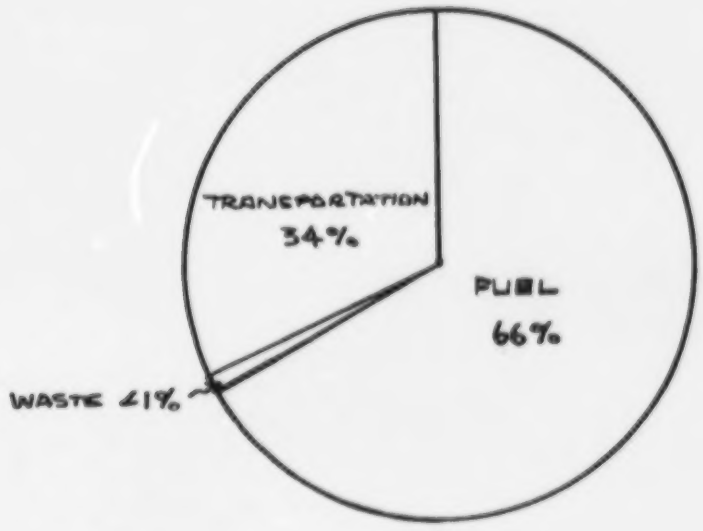

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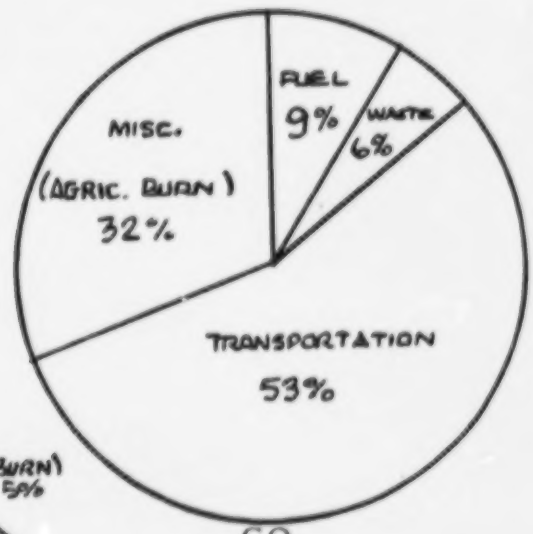

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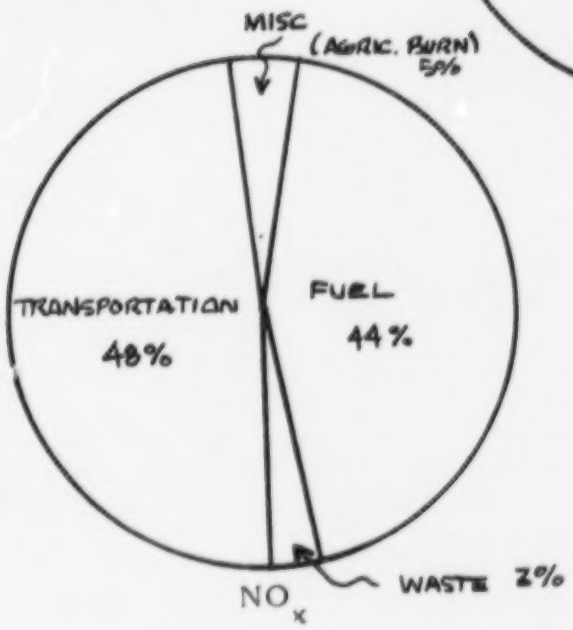

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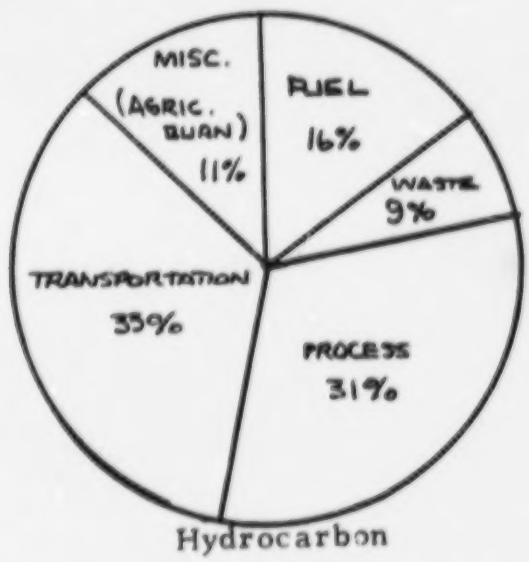

Hydrocarbon

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TABLE 1

IDAHO - 1970

SUMMARY OF ANNUAL EMISSIONS

AQCR		PARTIC. TPY	SO_2 TPY	CO TPY	HYDROCARB TPY	NO_x TPY
061		51 823	13 919	27 556	2 110	4 900
062		6 438	87 084	8 723	2 424	2 845
063		9 725	3 333	71 642	8 731	7 602
064		6 612	3 312	16 362	22 023	3 743
STATE TOTALS		74 598	107 648	124 283	35 288	19 091

NOTE: Totals Include Point Source Process Data

TABLE 2

IDAHO - 1970

ANNUAL FUEL USE - ALL STATIONARY SOURCES

RESIDENTIAL

AREA AQCR	COAL TPY	OIL 10^3 gpy	GAS 10^6 ft^3 py
061	44083	34748	2390
062	11381	23775	1108
063	26471	51582	1774
064	20457	31108	2361
STATE TOTALS	102392	141213	7633

TABLE 8

IDAHO - 1970

ANNUAL AIRCRAFT LANDINGS & TAKE-OFFS

AT AIRFIELDS (LTOs)

AQCR	COUNTY LOCATION / NAME	FOUR(4) ENGINE JET COM'L	THREE(3) ENGINE JET COM'L	TWO(2) ENGINE JET COM'L & EXEC.	TWO(2) ENGINE TURBOPROP COM'L	FOUR (4) ENGINE COM'L	TWO(2) ENGINE LIGHT COM'L/GEN	SINGLE(1) ENGINE LIGHT	SINGLE(1) ENGINE MILITARY JET
061	BANNOCK / POCATELLO	-0-	-0-	9 442	1 275	1 223	9 780	8 558	
	BONNEVILLE / IDA. FALLS			5 541	1 460	838	7 540	5 027	
062	NEZ PERCE / LEWISTON AP	-0-	-0-	2 560	2920	-0-	3 072	2 878	
063	TWIN FALLS / TWIN FALLS AP	-0-	-0-	1085	-0-	-0-	4 020	3 480	
064	ADA / BOISE AP	-0-	4 320	13 612	2 657	505	16 638	16068	12 216
065 MILITARY	ELMORE / MOUNTAIN HOME AFB						10 140		

TABLE 9

IDAHO - 1970

SUMMARY OF ANNUAL EMISSIONS

AIRCRAFT

AREA AQCR	AIRSHED	PARTIC. TPY	SO_2 TPY	CO TPY	HYDROCARB. TPY	NO_x TPY
061	POCATELLO & IDA FALLS	188	89	1 834	543	89
062	LEWISTON	47	17	121	77	28
063	TWIN FLS & MTN HOME AFB	125	34	339	295	57
084	BOISE	286	84	1 046	890	123
STATE TOTALS		746	224	3 340	1 805	298

TABLE 10

IDAHO - 1970

SUMMARY OF ANNUAL FUEL USE

RAILROADS

AREA AQCR			DIESEL OIL - 10^3 BBL	RAIL MILES
061			6 051	628
062			4 944	509
063			8 674	893
064			1 709	176

TABLE 11

IDAHO - 1970

SUMMARY OF ANNUAL EMISSIONS

RAILROADS

AREA AQCR		PARTIC TPY	SO_2 TPY	CO TPY	HYDROCARBONS TPY	NO_x TPY
061		76	197	212	151	227
062		62	161	173	124	185
063		108	282	304	227	325
064		21	56	60	44	64
STATE TOTALS		267	696	749	546	801

TABLE 12

IDAHO - 1970

REFUSE DISPOSAL BALANCE

AREA PROJ.	SOURCE	INCINERATION TPY	OPEN BURNING	LAND FILL		POPULATION %
061	RESID.	-0-	62 459	137 020		27.89
	COM'L/IND①	648	107 100			
062	RESID.	-0-	29 629	88 242		16.48
	COM'L/IND①	520	21 900			
063	RESID.	-0-	69 471	152 681		31.06
	COM'L/IND①	777	44 150			
064	RESID	-0-	44 165	132 568		24.57
	COM'L/IND①	630	16 500			
STATE TOTALS	RESID & COM'L/IND	2 575	386 874	512 298		100.00

1 Includes Agricultural Burning

TABLE 2 (continued)

AREA RQCR	COMMERCIAL			
	COAL THY	RES. OIL 10³ BBY	DIST. OIL 10³ BBY	GAS 10⁶ CUFTPY
061	-0-	-0-	5 513	2326
062	-0-	-0-	3 699	902
063	-0-	-0-	6 962	1 312
064	-0-	-0-	5 654	1 213
STATE TOTALS	-0-	-0-	21 828	5 753

TABLE 2 (continued)

AREA AQCR	INDUSTRIAL			
	COAL 10^3 TPY	RES OIL 10^3 BPY	DIST OIL 10^3 BPY	GAS 10^6 SCF PY
061	11 000	2 068	324	8 961
062	-0-	1858	-0-	10 091
063	97 170	3 541	-0-	4 671
064	68 500	2 775	7	4 556
STATE TOTALS	176 670	9 742	330	28 279

TABLE 8

IDAHO - 1970

ANNUAL COMMERCIAL, INDUSTRIAL, RESIDENTIAL FUEL USE

AREA SOURCES

	RESIDENTIAL			COMMERCIAL ①			INDUSTRIAL ②		
AIRSHED AQCR	COAL TPY	OIL 10^3 gal/yr	GAS 10^6 ft^3/yr	COAL TPY	DIST OIL 10^3 gal/yr	GAS 10^6 ft^3/yr	COAL TPY	RES. OIL 10^3 gal/yr	GAS 10^6 ft^3/yr
061	44 083	34 748	2 390	-0-	5 513	2 326	-0-	147	6 861
062	11 381	23 775	1 108	-0-	3 699	902	-0-	1150	8 793
063	26 471	51 582	1774	-0-	6 962	1312	-0-	1615	4 110
064	20 467	31 108	2361	-0-	5 654	1213	-0-	1475	2163
	① Assume zero residual oil factors for comm'l & industrial oil use - same ② Assume zero distillate oil factors for comm'l & industrial oil use - same								
STATE TOTALS	102 392	141 213	7633	-0-	21 828	5 753	-0-	4 387	21 927

TABLE 4

IDAHO - 1970

ANNUAL COMMERCIAL & INDUSTRIAL FUEL USE

POINT SOURCES

AREA AQCR		COMMERCIAL ① COAL TPY	COMMERCIAL ① DIST OIL 10^3GPY	COMMERCIAL ① GAS 10^6FT^{3}PY	INDUSTRIAL ② COAL TPY	INDUSTRIAL ② RESID OIL 10^3 GPY / DIST OIL 10^3 GPY	INDUSTRIAL ② GAS 10^6FT^{3}PY
061		-0-	-0-	-0-	11 000	1921 / 324	2 100
062		-0-	-0-	-0-	-0-	209 / 0	649
063		-0-	-0-	-0-	97 170	1926 / 0	561
064		-0-	-0-	-0-	68 500	1 300 / 9	2 393
① ②	Assumes no usage of residual oil / Assumes no usage of distillate oil (unless noted)	} See table 2					
STATE TOTALS					176 670	5 355 / 338	5703

TABLE 5
IDAHO - 1970
FUEL PARAMETERS

Fuel	Ash %	Sulfur %	Heat Content (BTU)
Coal	8.0	0.5	24.8×10^6/ton
Distillate Oil	---	0.8	154×10^3/gal
Residual Oil	---	1.0	152×10^3/gal
Natural Gas	---	---	1060/ft^3

TABLE 5A

IDAHO - 1970

SUMMARY OF ANNUAL EMISSIONS

FUEL CONSUMPTION

RESIDENTIAL, COMMERCIAL, INDUSTRIAL

AREA AQCR		PARTIC. TPY	SO_2 TPY	CO TPY	HYDROCARBONS TPY	NO_x TPY
081	Area	677	1 367	1238	480	1 260
	Point	247	119	763	591	443
	TOTAL	924	1486	2 001	1071	1 703
082	Area	350	747	366	292	1 165
	Point	57	82	122	85	70
	TOTAL	407	829	488	377	1 235
083	Area	607	1 509	824	342	1 108
	Point	3 141	1 218	520	325	960
	TOTAL	3 748	2 727	1 324	667	2 068
084	Area	432	1 100	626	237	775
	Point	975	1 061	2 142	950	988
	TOTAL	1 407	2 161	2 768	1 187	1 763
STATE TOTALS		6 433	7 203	6 581	3 302	6 769

TABLE 6

IDAHO - 1970

ANNUAL FUEL CONSUMPTION

AUTO & DIESEL TRAFFIC

AREA AQCR	COUNTIES/ AQCR	GASOLINE CONSUMPTN (BY COUNTY) 10^3 gal	AQCR TOTAL 10^3 gal	DIESEL CONSUMPTN (BY COUNTY)	AQCR TOTAL 10^3 gal
061	BANNOCK	25 375	111 709	DATA NOT AVAILABLE	6 772
	BEAR LAKE	3 990			
	BINGHAM	13 862			
	BONNEVILLE	29 542			
	BUTTE	1 777			
	CARIBOU	4 358			
	CLARK	1 151			
061	FRANKLIN	4 805			
	FREMONT	5 029			
	JEFFERSON	6 954			
	MADISON	7 205			
	ONEIDA	1 552			
	POWER	3 883			
	TETON	1 858			
062	BENEWAH	3 391	63 621	NO	3 417
	KOOTENAI	20 896			
	LATAH	13 019			
	NEZ PERCE	17 445			
	SHOSHONE	8 920			
063	ADAMS	1 396			
	BLAINE	4 257			
	BOISE	367			
	BOUNDARY	4 697			
	CAMAS	519			
	CANYON	29 997			
	CASSIA	5 510			
063	CLEARWATER	3 290			
	CUSTER	2 805			
	ELMORE	3 344			
	GEM	5 523			
	GOODING	5 [illegible]			
	IDAHO	5 804			
	JEROME	4 279			
063	LEMHI	3 501			
	LEWIS	1 321			
	LINCOLN	2 777			
	MINIDOKA	6 [illegible]			
	NEZ PERCE	2 320			
	POWER	3 702			
	TWIN FALLS	25 166			
063	VALLEY	3 446			
	WASHOE	3 446			

AREA AQCR	COUNTY/ AQCR	GASOLINE CONSUMPTN (BY COUNTY) 10^3 gal	AQCR TOTAL 10^3 gal
064	ADA	55 318	85 315
	CANYON	29 997	

TABLE 7

IDAHO - 1970

SUMMARY OF ANNUAL EMISSIONS

AUTOMOBILES AND TRUCKS

DIESEL & GASOLINE

AREA AQCR	SOURCE	PARTIC. TPY	SO_2 TPY	CO TPY	HYDROCARBONS TPY	NO_x TPY
061	GASOLINE	37	22	8 417	1548	1 289
	DIESEL	86	152	1 100	220	1 151
062	GASOLINE	21	13	4 919	596	704
	DIESEL	43	77	655	111	581
063	GASOLINE	45	27	9 417	1 796	1 561
	DIESEL	126	227	1 641	328	1 716
064	GASOLINE	28	17	7 361	1 287	915
	DIESEL	55	963	7 098	142	742
STATE TOTALS	GASOLINE	131	80	30 114	5 226	4 419
	DIESEL	308	1'419	10 994	811	4 190

TABLE 13

IDAHO - 1970

SUMMARY OF ANNUAL EMISSIONS

REFUSE DISPOSAL (Agricultural Burning)

AREA AQCR		PARTIC TPY	SO_2 TPY	CO TPY	HY DRCRBS TPY	NO_X TPY
061		857	-0-	5409	643	107
062		175	-0-	1106	131	22
063		361	-0-	2280	271	45
064		132	-0-	833	99	17
STATE TOTALS		1525	-0-	9628	1144	191

TABLE 14

IDAHO - 1970

SUMMARY OF ANNUAL EMISSIONS

COM'L/IND REFUSE DISPOSAL - INCINERATION

AIRA AQCR		PARTIC. TPY	SO_2 TPY	CO TPY	HYDROCARB TPY	NO_N TPY
061		2	0.5	3	1	1
062		2	0.4	3	1	1
063		3	0.6	4	1	1
064		2	0.5	3	1	1
STATE TOTALS		9	2	13	4	4

TABLE 15

IDAHO - 1970

SUMMARY OF ANNUAL EMISSIONS

BACKYARD BURNING

AREA RACE		PARTIC. TPY	SO_2 TPY	CO TPY	HYDROCARB TPY	NO_x TPY
061		500	31	2 669	938	197
062		237	15	1 259	444	89
063		556	35	3 053	1 042	208
064		353	22	1 877	662	132
STATE TOTALS		1 646	103	8 848	3 087	626

TABLE 16

IDAHO - 1970

SUMMARY OF SLASH BURNING

EMISSIONS - TONNAGE

AREA AQCR	PARTIC. TPY	SO_2 TPY	CO TPY	HYDROCAR TPY	NOx TPY	TOTAL FUEL TPY (10^3)
061	425	-0-	5920	296	185	185
062	-0-	-0-	-0-	-0-	-0-	-0-
063	3829	-0-	53280	2664	1668	1665
064	-0-	-0-	-0-	-0-	-0-	-0-
STATE TOTALS	4254	-0-	59200	2960	1850	1850

TABLE 17

Hydrocarbon Emission Inventory

Source Category	Name of solvent or hydrocarbon emitted	Quantity Emitted (Tons/Yr.)		
		Reactive		Non-Reactive
		Controlled	Uncontrolled	
Automotive			1548	
Fuel Combustion			1071	
Solid Waste Disposal			939	
Dry Cleaning 1. Perchloro-ethylene 2. Stoddard	Perchloro-ethylene Stoddard		268	19
~~Architectural Surface Coatings~~ AIRCRAFT OPS			543	
Tank Loss 1. Gasoline Marketing 2.			1173	
Industrial Process 1. Petroleum Refinery 2. Solvent Operations 3. Industrial Coatings 4. Asphalt Plants 5. 6. 7. 8. 9. 10. SLASH BURN			-0- 296	
Other (Please Specify) AGRICULTURAL BURN			643	
AQCR Totals 061-IDAHO	Total Hydro-carbons 6 500	Reactive 6 481		Non-Reactive 19

TABLE 18

Hydrocarbon Emission Inventory

Source Category	Name of solvent or hydrocarbon emitted	Quantity Emitted (Tons/Yr.) Reactive Controlled	Reactive Uncontrolled	Non-Reactive
Automotive			596	
Fuel Combustion			377	
Solid Waste Disposal			445	
Dry Cleaning 1. Perchloro-ethylene 2. Stoddard	Perchloro-ethylene Stoddard		154	18
~~Architectural Surface Coatings~~ AIRCRAFT CRS			77	
Tank Loss 1. Gasoline Marketing 2.			563	
Industrial Process 1. Petroleum Refinery 2. Solvent Operations 3. Industrial Coatings 4. Asphalt Plants 5. 6. 7. 8. 9. 10. SLASH BURN			-0- -0-	
Other (Please Specify) AGRICULTURAL BURN			131	

AQCR Totals	Total Hydrocarbons	Reactive	Non-Reactive
062-IDAHO	2361	2343	18

TABLE 19

Hydrocarbon Emission Inventory

Source Category	Name of solvent or hydrocarbon emitted	Quantity Emitted (Tons/Yr.) Reactive Controlled	Reactive Uncontrolled	Non-Reactive
Automotive			1796	
Fuel Combustion			667	
Solid Waste Disposal			209	
Dry Cleaning 1. Perchloro-ethylene 2. Stoddard	Perchloro-ethylene Stoddard		238	20
~~Architectural Surface Coatings~~ AIRCRAFT ORS			295	
Tank Loss 1. Gasoline Marketing 2.			1440	
Industrial Process 1. Petroleum Refinery 2. Solvent Operations 3. Industrial Coatings 4. Asphalt Plants 5. AFB-FUEL BURN 6. 7. 8. 9. 10. SLASH BURN			-0- 264 264	
Other (Please Specify) AGRICULTURAL BURN			271	

AQCR Totals	Total Hydro-carbons	Reactive	Non-Reactive
063-IDAHO	7924	7904	20

TABLE 20

Hydrocarbon Emission Inventory

Source Category	Name of solvent or hydrocarbon emitted	Quantity Emitted (Tons/Yr.) Reactive Controlled	Reactive Uncontrolled	Non-Reactive
Automotive			1287	
Fuel Combustion			1187	
Solid Waste Disposal			134	
Dry Cleaning 1. Perchloro-ethylene 2. Stoddard	Perchloro-ethylene Stoddard		240	10
~~Architectural Surface Coatings~~ AIRCRAFT OPS			890	
Tank Loss 1. Gasoline Marketing 2. TANK FARM			896 2439	-
Industrial Process 1. Petroleum Refinery 2. Solvent Operations 3. Industrial Coatings 4. Asphalt Plants 5. 6. 7. 8. 9. 10. SLASH BURN			2 -0-	
Other (Please Specify) AGRICULTURAL BURN			1143	
AQCR Totals 064-IDAHO	Total Hydro-carbons 8228	Reactive 8218		Non-Reactive 10

TABLE 21

~EMISSIONS INVENTORY SUMMARY~

FOR THE STATE OF IDAHO CITY OF BOISE AIR QUALITY CONTROL REGION Pop 97 392

DATA REPRESENTATIVE OF CALENDAR YEAR 1970

NOT REPRODUCIBLE

SOURCE CATEGORY	TONS OF POLLUTANT / YEAR					FUEL ETC.	
	PART	SO_2	CO	HC	NO_x	QUANTITY	UNITS
I. STEAM GENERATION							
A. PRODUCTION FUEL-AREA SOURCE							
1. BITUMINOUS COAL	19	33	59	14	6	2346	TPY
2. DISTILLATE OIL	66	151	33	20	79	13 103	10^3 gpy
3. NATURAL GAS	15	1	16	6	60	164	10^6 ft^3/yr
4. WOOD							
5. OTHER (SPECIFY)							
6. TOTAL	100	185	108	40	145		
B. COMM - INSTL & IND							
1.a. (BITUMINOUS) COAL-AREA SOURCE							
b. (BITUMINOUS) COAL-POINT SOURCE							
2. COKE - POINT SOURCE							
3.a. DISTILLATE OIL-AREA SOURCE	22	169	0	4	86	2899	10^3 gpy
b. DISTILLATE OIL-POINT SOURCE							
4.a. RESIDUAL OIL-AREA SOURCE	12	81	0	2	31	1083	"
b. RESIDUAL OIL-POINT SOURCE							
5.a. NATURAL GAS-AREA SOURCE	22	1	8	33	163	2363	10^6 ft^3/yr
b. NATURAL GAS-POINT SOURCE							
6. PROCESS GAS-POINT SOURCE							
7.a WOOD-AREA SOURCE							
b. WOOD-POINT SOURCE							
8.a. OTHER (SPECIFY)-AREA SOURCE							
b. OTHER (SPECIFY)-POINT SOURCE							
9. TOTAL	56	251	8	41	280		
C. STEAM-ELECTRIC POWER PLANT							
1. ANTHRACITE COAL							
2. BITUMINOUS COAL							
3. DISTILLATE OIL							
4. RESIDUAL OIL							
5. NATURAL GAS							
6. OTHER (SPECIFY)							
7. TOTAL							
D. TOTAL FUEL COMBUSTION							

TABLE 21A

~EMISSIONS INVENTORY SUMMARY~

FOR THE STATE OF IDAHO CITY OF BOISE

AIR QUALITY CONTROL REGION POP 97392

DATA REPRESENTATIVE OF CALENDAR YEAR 1970

NOT REPRODUCIBLE

SOURCE CATEGORY	TONS OF POLLUTANT / YEAR					FUEL ETC.	
	PART	SO_2	CO	HC	NO_x	QUANITY	UNITS
I. PROCESS LOSSES							
A. AREA SOURCES							
B. POINT SOURCES							
III. SOLID WASTE DISPOSAL							
A. INCINERATION							
1.a. ON SITE - AREA SOURCE	1	0	2	1.6	1	315	TPY
b. ON SITE - POINT SOURCE							
2. MUNICIPAL, ETC. - POINT SOURCE							
B. OPEN BURNING							
1.a ON-SITE - AREA SOURCE	192	12	1037	362	72	2484	TPY
b. ON-SITE POINT SOURCE							
2.a. DUMPS - AREA SOURCE							
b. DUMPS - POINT SOURCE							
C.1.OTHER (SPECIFY) - AREA SOURCE							
2. OTHER (SPECIFY) - POINT SOURCE							
D. TOTAL SOLID WASTE DISPOSAL	193	12	1089	362	73	2446	TPY
IV. TRANSPORTATION - AREA SOURCE							
A.1. MOTOR VEHICLES - GASOLINE	9	6	2961	966	2[illegible]	44[illegible]	10^3gpy
2. MOTOR VEHICLES - DIESEL	18	32	231	46	241	14[illegible]	10^3gpy
B. OFF-HIGHWAY FUEL USAGE							
C. AIRCRAFT	6	16	18	13	19	513	10^3gpy
D. RAIL ROAD				296		28200	10^3gpy
E. VESSELS							
F. GASOLINE HNDLG EVAP LOSSES							
G. OTHER (SPECIFY)							
H. TOTAL TRANSPORTATION	33	54	321	840	843	75910	10^3gpy
V. MISCELLANEOUS - AREA SOURCES							
A. AGRICULTURAL BURNING							
B. OTHER (SPECIFY) SOLV. EVAP				123		122	TPY
C. TOTAL MISCELLANEOUS				122		122	TPY
VI. GRAND TOTAL							
A. AREA SOURCE							
B. POINT SOURCE							
C. TOTAL	382	502	1969	1905	1041		

TABLE 22

~ EMISSIONS INVENTORY SUMMARY ~

FOR THE STATE OF IDAHO CITY of POCATELLO AIR QUALITY CONTROL REGION Reg 40036

DATA REPRESENTATIVE OF CALENDAR YEAR 1970

NOT REPRODUCIBLE

SOURCE CATEGORY	TONS OF POLLUTANT / YEAR					FUEL ETC.	
	PART	SO_2	CO	HC	NO_x	QUANTY	UNITS
I. FUEL COMBUSTION							
A. POTENTIAL FUEL-AREA SOURCE							
1. ANTHRACITE, COAL	26	46	80	19	8	3212	TPY
2. DISTILLATE OIL	32	73	16	10	38	6341	[illegible]
3. NATURAL GAS	7	0	7	3	27	735	[illegible]
4. WOOD							
5. OTHER (SPECIFY)							
6. TOTAL	65	119	113	32	73		
B. COMM - INSTL & IND							
1.a. (BITUMINOUS) COAL AREA SOURCE							
b. (BITUMINOUS) COAL-POINT SOURCE							
2. COKE - POINT SOURCE							
3.a. DISTILLATE OIL-AREA SOURCE	1	8	0	0	9	151	[illegible]
b. DISTILLATE OIL-POINT SOURCE							
4.a. RESIDUAL OIL - AREA SOURCE	1	3	0	0	1	95	"
b. RESIDUAL OIL - POINT SOURCE							
5.a. NATURAL GAS - AREA SOURCE	27	1	8	45	226	3.005	[illegible]
b. NATURAL GAS - POINT SOURCE							
6. PROCESS GAS - POINT SOURCE							
7.a WOOD - AREA SOURCE							
b. WOOD - POINT SOURCE							
8a. OTHER (SPECIFY) - AREA SOURCE							
b. OTHER (SPECIFY) - POINT SOURCE							
9. TOTAL	29	12	8	48	231		
C. STEAM - ELECTRIC POWER PLANT							
1. ANTHRACITE COAL							
2. BITUMINOUS COAL							
3. DISTILLATE OIL							
4. RESIDUAL OIL							
5. NATURAL GAS							
6. OTHER (SPECIFY)							
7. TOTAL							
D. TOTAL FUEL COMBUSTION							

TABLE 22A

~EMISSIONS INVENTORY SUMMARY~

FOR THE STATE OF IDAHO CITY OF POCATELLO
AIR QUALITY CONTROL REGION POP 40036
DATA REPRESENTATIVE OF CALENDAR YEAR 1970

SOURCE CATEGORY	TONS OF POLLUTANT / YEAR					FUEL ETC.	
	PART	SO_2	CO	HC	NO_x	QUANITY	UNITS
II. PROCESS LOSSES							
A. AREA SOURCES							
B. POINT SOURCES							
III. SOLID WASTE DISPOSAL							
A. INCINERATION							
1.a. ON SITE - AREA SOURCE	1	0	1	0	0	216	TPY
b. ON SITE - POINT SOURCE							
2. MUNICIPAL, ETC. - POINT SOURCE							
B. OPEN BURNING							
1.a. ON-SITE - AREA SOURCE	80	5	420	151	30	10098	TPY
b. ON-SITE POINT SOURCE							
2.a. DUMPS - AREA SOURCE							
b. DUMPS - POINT SOURCE							
C.1. OTHER (SPECIFY) - AREA SOURCE							
2. OTHER (SPECIFY) - POINT SOURCE							
D. TOTAL SOLID WASTE DISPOSAL	81	5	420	151	30	10262	TPY
IV. TRANSPORTATION - AREA SOURCE							
A. 1. MOTOR VEHICLES - GASOLINE	4	2	1262	207	120	12018	[illegible]
2. MOTOR VEHICLES - DIESEL	8	14	98	20	102	614	
B. OFF-HIGHWAY FUEL USAGE							
C. AIRCRAFT							
D. RAILROAD							
E. VESSELS							
F. GASOLINE HNDLG EVAP LOSSES				130		[illegible]	[illegible]
G. OTHER (SPECIFY)							
H. TOTAL TRANSPORTATION	12	16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
V. MISCELLANEOUS - AREA SOURCES							
A. AGRICULTURAL BURNING							
B. OTHER (SPECIFY) Solv. Evap				51		51	TPY
C. TOTAL MISCELLANEOUS				51		51	TPY
VI. GRAND TOTAL							
A. AREA SOURCE							
B. POINT SOURCE							
C. TOTAL	186	162	1969	[illegible]	[illegible]		

TABLE 23

~EMISSIONS INVENTORY SUMMARY~

FOR THE STATE OF IDAHO CITY of IDAHO FALLS AIR QUALITY CONTROL REGION Pop 35 776

DATA REPRESENTATIVE OF CALENDAR YEAR 1970

SOURCE CATEGORY	TONS OF POLLUTANT / YEAR					FUEL ETC.	
	PART	SO_2	CO	HC	NO_x	QUANTITY	UNITS
I. FUEL COMBUSTION			-				
A. RESIDENTIAL FUEL-AREA SOURCE							
1. (ANTHRACITE) COAL	22	38	68	16	7	2706	TPY
2. DISTILLATE OIL	41	94	20	12	49	8184	[illegible]
3. NATURAL GAS	7	0	8	3	29	760	[illegible]
4. WOOD							
5. OTHER (SPECIFY)							
6. TOTAL	70	132	96	31	85		
B. COMM - INSTL & IND							
1.a. (BITUMINOUS) COAL AREA SOURCE							
b. (BITUMINOUS) COAL-POINT SOURCE							
2. COKE - POINT SOURCE							
3.a. DISTILLATE OIL-AREA SOURCE	10	79	0	2	40	1361	[illegible]
b. DISTILLATE OIL-POINT SOURCE							
4. a. RESIDUAL OIL - AREA SOURCE	0	3	0	1	1	40	"
b. RESIDUAL OIL - POINT SOURCE							
5. a. NATURAL GAS - AREA SOURCE	9	0	9	6	38	3615	[illegible]
b. NATURAL GAS - POINT SOURCE							
6. PROCESS GAS - POINT SOURCE							
7.a. WOOD - AREA SOURCE							
b. WOOD - POINT SOURCE							
8 a. OTHER (SPECIFY) - AREA SOURCE							
b. OTHER (SPECIFY) - POINT SOURCE							
9. TOTAL	19	82	9	8	80		
C. STEAM - ELECTRIC POWER PLANT							
1. ANTHRACITE COAL							
2. BITUMINOUS COAL							
3. DISTILLATE OIL							
4. RESIDUAL OIL							
5. NATURAL GAS							
6. OTHER (SPECIFY)							
7. TOTAL							
D. TOTAL FUEL COMBUSTION							

TABLE 23A

~EMISSIONS INVENTORY SUMMARY~

FOR THE STATE OF IDAHO City of IDAHO FALLS

AIR QUALITY CONTROL REGION POP 35776

DATA REPRESENTATIVE OF CALENDAR YEAR 1970

SOURCE CATEGORY	TONS OF POLLUTANT / YEAR					FUEL ETC.	
	PART	SO_2	CO	HC	NO_x	QUANITY	UNITS
II. PROCESS LOSSES							
A. AREA SOURCES							
B. POINT SOURCES							
III. SOLID WASTE DISPOSAL							
A. INCINERATION							
1.a. ON SITE - AREA SOURCE	0	0	1	0	0	120	TPY
b. ON SITE - POINT SOURCE							
2. MUNICIPAL, ETC. - POINT SOURCE							
B. OPEN BURNING							
1.a. ON-SITE - AREA SOURCE	71	4	378	154	27	8910	TPY
b. ON-SITE POINT SOURCE							
2.a. DUMPS - AREA SOURCE							
b. DUMPS - POINT SOURCE							
C.1. OTHER (SPECIFY) - AREA SOURCE							
2. OTHER (SPECIFY) - POINT SOURCE							
D. TOTAL SOLID WASTE DISPOSAL	71	4	379	154	27	9030	TPY
IV. TRANSPORTATION - AREA SOURCE							
A.1. MOTOR VEHICLES - GASOLINE	3	2	[illegible]	147	85	[illegible]	10^3 Veh
2. MOTOR VEHICLES - DIESEL	5	9	[illegible]	13	68	400	10^3 Veh
B. OFF-HIGHWAY FUEL USAGE							
C. AIRCRAFT	8	20	21	15	23	600	10^3 Veh
D. RAILROAD							
E. VESSELS				89		[illegible]	10^3 gal
F. GASOLINE HNDLG EVAP LOSSES							
G. OTHER (SPECIFY)							
H. TOTAL TRANSPORTATION	16	31	[illegible]	264	176	[illegible]	10^3 veh
V. MISCELLANEOUS - AREA SOURCES							
A. AGRICULTURAL BURNING							
B. OTHER (SPECIFY) Struct. Fires				48		48	TPY
C. TOTAL MISCELLANEOUS				48		48	TPY
VI. GRAND TOTAL							
A. AREA SOURCE							
B. POINT SOURCE							
C. TOTAL	176	249	1964	486	368		

TABLE 24

~EMISSIONS INVENTORY SUMMARY~

FOR THE STATE OF IDAHO, City of Lewiston AIR QUALITY CONTROL REGION Pop 26 068

DATA REPRESENTATIVE OF CALENDAR YEAR 1970

SOURCE CATEGORY	TONS OF POLLUTANT / YEAR					FUEL ETC.	
	PART	SO_2	CO	HC	NO_x	QUANITY	UNITS
I. FUEL COMBUSTION							
A. POTENTIAL FUEL-AREA SOURCE							
1. (CONTRABAND) COAL	2	3	5	1	1	204	TPY
2. DISTILLATE OIL	23	53	11	7	27	4570	10^3 gpy
3. NATURAL GAS	3	0	3	1	11	310	10^6 scf/yr
4. WOOD							
5. OTHER (SPECIFY)							
6. TOTAL	28	56	19	9	39		
B. COMM - INSTL & IND							
1.a. (BITUMINOUS) COAL-AREA SOURCE							
b. (BITUMINOUS) COAL-POINT SOURCE							
2. COKE - POINT SOURCE							
3.a. DISTILLATE OIL-AREA SOURCE	7	56	0	1	28	977	10^3 gpy
b. DISTILLATE OIL-POINT SOURCE							
4.a. RESIDUAL OIL-AREA SOURCE	5	33	0	1	13	457	10^3 gpy
b. RESIDUAL OIL-POINT SOURCE							
5.a. NATURAL GAS-AREA SOURCE	71	2	11	141	638	7191	10^6 scf/yr
b. NATURAL GAS-POINT SOURCE							
6. PROCESS GAS-POINT SOURCE							
7.a. WOOD-AREA SOURCE							
b. WOOD-POINT SOURCE							
8.a. OTHER (SPECIFY)-AREA SOURCE							
b. OTHER (SPECIFY)-POINT SOURCE							
9. TOTAL	83	91	11	142	748		
C. STEAM-ELECTRIC POWER PLANT							
1. ANTHRACITE COAL							
2. BITUMINOUS COAL							
3. DISTILLATE OIL							
4. RESIDUAL OIL							
5. NATURAL GAS							
6. OTHER (SPECIFY)							
7. TOTAL							
D. TOTAL FUEL COMBUSTION							

TABLE 24A

~EMISSIONS INVENTORY SUMMARY~

FOR THE STATE OF IDAHO CITY OF LEWISTON
AIR QUALITY CONTROL REGION POP 26068
DATA REPRESENTATIVE OF CALENDAR YEAR 1970

SOURCE CATEGORY	TONS OF POLLUTANT / YEAR					FUEL ETC.	
	PART	SO_2	CO	HC	NO_x	QUANTY	UNITS
II. PROCESS LOSSES							
A. AREA SOURCES							
B. POINT SOURCES							
III. SOLID WASTE DISPOSAL							
A. INCINERATION							
1.a. ON SITE - AREA SOURCE	>0	>0	>0	>0	>0	63	TPY
b. ON SITE - POINT SOURCE	-						
2. MUNICIPAL, ETC - POINT SOURCE							
B. OPEN BURNING							
1.a ON-SITE - AREA SOURCE	52	3	277	97	19	6 [illegible]	TPY
b. ON-SITE POINT SOURCE							
2. a. DUMPS - AREA SOURCE							
b. DUMPS - POINT SOURCE							
C. 1. OTHER (SPECIFY) - AREA SOURCE							
2. OTHER (SPECIFY) - POINT SOURCE							
D. TOTAL SOLID WASTE DISPOSAL	52	3	277	97	19	6604	TPY
IV. TRANSPORTATION - AREA SOURCE							
A. 1. MOTOR VEHICLES - GASOLINE	2	1	793	124	73	7228	10^3gpy
2. MOTOR VEHICLES - DIESEL	6	8	59	12	61	368	"
B. OFF-HIGHWAY FUEL USAGE							
C. AIRCRAFT							
D. RAILROAD	1	2	2	2	2	60	10^3gpy
E. VESSELS							
F. GASOLINE HNDLG EVAP LOSSES				76		7230	10^3gpy
G. OTHER (SPECIFY)							
H. TOTAL TRANSPORTATION	60	11	820	214	136	[illegible]	10^3gpy
V. MISCELLANEOUS - AREA SOURCES							
A. AGRICULTURAL BURNING							
B. OTHER (SPECIFY) SOLV. EVAP				35		35	TPY
C. TOTAL MISCELLANEOUS				35		35	TPY
VI. GRAND TOTAL							
A. AREA SOURCE							
B. POINT SOURCE							
C. TOTAL	223	161	1127	497	992		

TABLE 25

~EMISSIONS INVENTORY SUMMARY--

FOR THE STATE OF IDAHO CITY of TWIN FALLS Pop 21914
AIR QUALITY CONTROL REGION
DATA REPRESENTATIVE OF CALENDAR YEAR 1970

SOURCE CATEGORY	TONS OF POLLUTANT / YEAR					FUEL ETC.	
	PART	SO_2	CO	HC	NO_x	QUANITY	UNITS
I. FUEL COMBUSTION							
A. RESIDENTIAL FUEL-AREA SOURCE							
1. ANTHRACITE COAL	31	56	98	23	10	3916	TPY
2. DISTILLATE OIL	25	57	12	7	30	996	10^3gpy
3. NATURAL GAS	4	0	4	2	14	395	10^6scf/yr
4. WOOD							
5. OTHER (SPECIFY)							
6. TOTAL	60	113	114	32	54		
B. COMM - INSTL & IND							
1.a. (BITUMINOUS) COAL-AREA SOURCE							
b. (BITUMINOUS) COAL-POINT SOURCE							
2. COKE - POINT SOURCE							
3.a. DISTILLATE OIL-AREA SOURCE	5	91	0	1	21	711	10^3gpy
b. DISTILLATE OIL-POINT SOURCE							
4.a. RESIDUAL OIL-AREA SOURCE	2	13	0	0	5	165	10^3gpy
b. RESIDUAL OIL-POINT SOURCE							
5.a. NATURAL GAS-AREA SOURCE	13	0	3	23	110	1436	10^6scf/yr
b. NATURAL GAS-POINT SOURCE							
6. PROCESS GAS-POINT SOURCE							
7.a. WOOD-AREA SOURCE							
b. WOOD-POINT SOURCE							
8a. OTHER (SPECIFY)-AREA SOURCE							
b. OTHER (SPECIFY)-POINT SOURCE							
9. TOTAL	20	54	3	24	136		
C. STEAM-ELECTRIC POWER PLANT							
1. ANTHRACITE COAL							
2. BITUMINOUS COAL							
3. DISTILLATE OIL							
4. RESIDUAL OIL							
5. NATURAL GAS							
6. OTHER (SPECIFY)							
7. TOTAL							
D. TOTAL FUEL COMBUSTION							

TABLE 25A

~EMISSIONS INVENTORY SUMMARY~

FOR THE STATE OF IDAHO _ CITY OF TWIN FALLS
AIR QUALITY CONTROL REGION POP 21914
DATA REPRESENTATIVE OF CALENDAR YEAR 1970

SOURCE CATEGORY	TONS OF POLLUTANT / YEAR					FUEL ETC.	
	PART	SO_2	CO	HC	NO_x	QUANITY	UNITS
I. PROCESS LOSSES							
A. AREA SOURCES							
B. POINT SOURCES							
III. SOLID WASTE DISPOSAL							
A. INCINERATION							
1.a. ON SITE - AREA SOURCE	>0	>0	>0	>0	>0	72	TPY
b. ON SITE - POINT SOURCE							
2. MUNICIPAL, ETC. - POINT SOURCE							
B. OPEN BURNING							
1.a. ON-SITE - AREA SOURCE	44	3	234	83	16	5499	TPY
b. ON-SITE POINT SOURCE							
2.a. DUMPS - AREA SOURCE							
b. DUMPS - POINT SOURCE							
C.1. OTHER (SPECIFY) - AREA SOURCE							
2. OTHER (SPECIFY) - POINT SOURCE							
D. TOTAL SOLID WASTE DISPOSAL	44	3	234	83	16		
IV. TRANSPORTATION - AREA SOURCE							
A.1. MOTOR VEHICLES - GASOLINE	2	1	573	94	55	5467	10^3 BBL
2. MOTOR VEHICLES - DIESEL	4	6	45	9	47	27	10^3 BBL
B. OFF-HIGHWAY FUEL USAGE							
C. AIRCRAFT							
D. RAILROAD	1	3	3	2	3	80	10^3 BBL
E. VESSELS							
F. GASOLINE HNDLG EVAP LOSSES				67		5458	10^3 BBL
G. OTHER (SPECIFY)							
H. TOTAL TRANSPORTATION	7	10	621	162	105		
V. MISCELLANEOUS - AREA SOURCES							
A. AGRICULTURAL BURNING							
B. OTHER (SPECIFY) ~~SOLVENT~~				30		30	TPY
C. TOTAL MISCELLANEOUS				30		30	TPY
VI. GRAND TOTAL							
A. AREA SOURCE							
B. POINT SOURCE							
C. TOTAL	135	180	868	334	311		

TABLE 26

~EMISSIONS INVENTORY SUMMARY~

FOR THE STATE OF IDAHO CITY OF COEUR d'ALENE AIR QUALITY CONTROL REGION

DATA REPRESENTATIVE OF CALENDAR YEAR 1970 Pop 16228

SOURCE CATEGORY	TONS OF POLLUTANT / YEAR					FUEL ETC.	
	PART	SO_2	CO	HC	NO_x	QUANITY	UNITS
I. FUEL COMBUSTION							
A. PRIMARY FUEL-AREA SOURCE							
1. ANTHRACITE COAL	14	25	44	10	4	1712	TPY
2. DISTILLATE OIL	17	40	9	5	21	342	10^3 BBL/Y
3. NATURAL GAS	3	-0-	3	1	11	285	10^6 FT^3/Yr
4. WOOD							
5. OTHER (SPECIFY)							
6. TOTAL	34	65	56	16	36		
B. COMM - INSTL & IND							
1.a. (BITUMINOUS) COAL-AREA SOURCE							
b. (BITUMINOUS) COAL-POINT SOURCE							
2. COKE - POINT SOURCE							
3.a. DISTILLATE OIL-AREA SOURCE	5	48	-0-	1	2	608	10^3 BBL/Y
b. DISTILLATE OIL-POINT SOURCE							
4.a. RESIDUAL OIL-AREA SOURCE	5	32	-0-	1	12	400	10^3 BBL/Y
b. RESIDUAL OIL-POINT SOURCE							
5.a. NATURAL GAS-AREA SOURCE	4	-0-	3	3	15	705	10^6 FT^3/Yr
b. NATURAL GAS-POINT SOURCE							
6. PROCESS GAS-POINT SOURCE							
7.a. WOOD-AREA SOURCE							
b. WOOD-POINT SOURCE							
8.a. OTHER (SPECIFY)-AREA SOURCE							
b. OTHER (SPECIFY)-POINT SOURCE							
9. TOTAL	14	80	3	4	29		
C. STEAM-ELECTRIC POWER PLANT							
1. ANTHRACITE COAL							
2. BITUMINOUS COAL							
3. DISTILLATE OIL							
4. RESIDUAL OIL							
5. NATURAL GAS							
6. OTHER (SPECIFY)							
7. TOTAL							
D. TOTAL FUEL COMBUSTION							

TABLE 26A

~EMISSIONS INVENTORY SUMMARY~

FOR THE STATE OF IDAHO CITY OF COEUR d' ALENE
AIR QUALITY CONTROL REGION POP 16228

DATA REPRESENTATIVE OF CALENDAR YEAR 1970 ----

SOURCE CATEGORY	TONS OF POLLUTANT / YEAR					FUEL ETC.	
	PART	SO_2	CO	HC	NO_x	QUANITY	UNITS
II. PROCESS LOSSES							
A AREA SOURCES							
B. POINT SOURCES							
III. SOLID WASTE DISPOSAL							
A. INCINERATION							
1.a. ON SITE - AREA SOURCE	1	-0-	1	-0-	-0-	160	TPY
b. ON SITE - POINT SOURCE							
2. MUNICIPAL, ETC. - POINT SOURCE							
B. OPEN BURNING							
1.a. ON-SITE - AREA SOURCE	38	2	173	61	12	4072	TPY
b. ON-SITE POINT SOURCE							
2.a. DUMPS - AREA SOURCE							
b. DUMPS - POINT SOURCE							
C.1.OTHER (SPECIFY) - AREA SOURCE							
2. OTHER (SPECIFY) - POINT SOURCE	34	2	174	241	12	4282	TPY
D. TOTAL SOLID WASTE DISPOSAL							
IV. TRANSPORTATION - AREA SOURCE							
A.1. MOTOR VEHICLES - GASOLINE	1	1	488	75	44	4541	10^3gal/yr
2. MOTOR VEHICLES - DIESEL	3	6	36	7	37	222	"
B. OFF-HIGHWAY FUEL USAGE							
C. AIRCRAFT							
D. RAILROAD	21	54	58	42	62	1670	10^3gal/yr
E. VESSELS							
F GASOLINE HNDLG EVAP LOSSES				46		4360	10^3gal/yr
G. OTHER (SPECIFY)							
H. TOTAL TRANSPORTATION	25	60	582	170	143	793	10^3gal/yr
V. MISCELLANEOUS - AREA SOURCES							
A. AGRICULTURAL BURNING							
B. OTHER (SPECIFY) SOLV. EVAP				22		22	TPY
C. TOTAL MISCELLANEOUS				22		22	TPY
VI. GRAND TOTAL							
A. AREA SOURCE							
B. POINT SOURCE							
C. TOTAL	163	207	705	275	678	—	

NOT REPRODUCIBLE

APPENDIX

The following forms are included in the Appendix:

1. Emission Factor Reference Sheet - Field Burning

2. Emission Factor Reference Sheet - Slash Burning

3. Emission Factor Reference Sheet - Hog Fuel Boiler

4. Air Contaminant Emissions Survey

5. Typical Cobol Keypunch Form (C-64) - Two Types

6. Table 1 Source Category Totals Input Sheet

7. Table 2 Emissions Factors Set

8. Table 3 Area 2 Source Data

9. Point Source Data Form

NOTE: The distribution of these forms has been limited to the Idaho State Agency only.